

REVIEW ARTICLE

SYRIA CONFLICT AND CHEMICAL WEAPONS: WHAT IS THE REALITY?

Jiri Patocka ^{1,2}

¹ Institute of Radiology, Toxicology and Civil Protection, Faculty of Health and Social Studies, University of South Bohemia České Budějovice, České Budějovice, Czech Republic

² Biomedical Research Centre, University Hospital, Hradec Kralove, Czech Republic

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Summary

The Syrian civil war is a shameful matter for the contemporary world. It is full of suffering for the civilian population and is one of the causes of the current huge migration of Syrian people in Europe. Suffering of people affected by the war is still escalating due to use of banned chemical weapons. The entire civilized world is appalled by the atrocities of the Syrian civil war.

Key words: Syrian civil war; chemical weapons; victims, sarin; mustard gas; chlorine

INTRODUCTION

Since 2013, when the regime of Bashar al-Assad allegedly used chemical weapons (CW) against the civilian population, the use of chemical weapons in Syria has often been discussed as a very thorny problem [1]. What is the truth? What do we know about this? The situation is very confusing and information is conflicting, depending on which side is served. Let us focus a bit on it. Use of chemical weapons in the Syrian Civil War has been confirmed by the United Nations [2]. The deadliest attacks were the Khan al-Assal attack in the suburbs of Aleppo in March 2013 and the Ghouta attack in the suburbs of Damascus in August 2013. Several other attacks

have been alleged, reported and/or investigated [3-5]. Prior to September 2013 the Syrian government had not publicly admitted to possess chemical weapons, although Western intelligence services believed it to hold one of the world's largest stockpiles.

Syria's chemical weapons stocks, and the possibility that President Bashar al-Assad's government might use them, has been one of the factors that has most worried the observers of the conflict. In July 2012, the Syrian government implicitly admitted what had long been suspected by the experts in the field of chemical weapons proliferation - that Syria had stocks of chemical weapons [6]. Damascus said the weapons, stored and secured by the armed forces, would never be used "inside Syria", but would be used against an external attack [7].

A February 2014 a report from the UN Human Rights Council stated that the chemical agents used in the Khan-Al-Assal attack bore the "same unique hallmarks" as those used in the 2013 Ghouta attacks. The UN report also indicated that the perpe-

✉ University of South Bohemia České Budějovice,
Faculty of Health and Social Studies, Institute
of Radiology, Toxicology and Civil Protection,
Jírovčova 24/1347, 370 04 České Budějovice,
Czech Republic

toxicology@toxicology.cz

trators of the Al-Ghouta attack "likely had access to the chemical weapons stockpile of the Syrian military" [8].

CHEMICAL WEAPONS IN SYRIA CONFLICT

The Syrian uprising, which started in 2011, brought great concern among the Chemical Defense Community. Until October 14, 2013, Syria was one of the seven non-State Parties of the Chemical Weapons Convention (CWC). In 1968, Syria acceded to the 1925 Geneva Protocol, which prohibits the use of CW, but not other activities, like production or stockpiling, which are enshrined in CWA. The Syrian government had been ambiguous in its public statements about its chemical capability and even in 2005 it said that the "Syrian Arab Republic does not possess chemical weapons, their means of delivery, or any related materials" [9]. Nevertheless, soon after the Syrian conflict started, both fractions, the Bashar al-Assad regime on one side and the Syrian opposition on the other, were accusing each other of CW

use. The Syrian conflict has been and still is of a special concern, not only because the Syrian government has a chemical capability, but also because there are many actors in this conflict which develops into a global conflict [10].

REPORTED CHEMICAL WEAPON ATTACKS IN THE SYRIAN CIVIL WAR

After the first chemical attack in Syria in 2013, other attacks followed. The world has been learning about them primarily from news reports. All reports, however, may not be objective. There were many chemical attacks in Syria and all available information about them is listed in Table I. However, not all the sources from which the table draws are credible. But other sources of information are not available or are very unreliable. Alliance BRICS (Brazil, Russia, India, China, and South Africa) accused President Bashar Assad's regime of mass atrocity crimes without levying the same accusation against the rebels fighting the regime [12].

Table I. Reported chemical weapons attacks in the Syrian Civil War

Date of Attack	Location	Attack Controlled by	Civilian Victims Fatal/Non-fatal	Soldier Victims Fatal/Non-fatal	CW-agent	Information Source
17 October, 2012	Salgin					[13]
23 December, 2012	Al-Bayadah	Free Syrian Army	0/5	0/Approx. 100	Agent 15 (?) ***	[14, 15]
13 and 14 March, 2013	Daraya and Otaybah					[13, 16]
19 March, 2013	Khan al-Asal	Syrian Army	19/107	1/17	Sarin	[13]
24 March, 2013	Adra					[13]
11 and 12 April, 2013	Jobar					[13]
13 April, 2013	Sheikh Maqsood, Jobar	Kurdish forces	3/> 12			[13]
14 April, 2013	Jobar					[13]
29 April, 2013	Saraqib	Free Syrian Army	1/10	0/2	Sarin	[13]
23 May, 5 August, 2013	Adra					[13, 17]
21 August, 2013	Ghouta		734/?		Sarin	[17, 18]
21 August, 2013	Muadamiyat al-Sham		103/?		Sarin	[18, 19]
22 August, 2013	Jobar	Syrian Army		0/16		[13]
24 August, 2013	Jobar	Syrian Army		0/24	Sarin	[13]
25 August, 2013	Ashrafiyat	Syrian Army		0/5	Sarin	[13]
10, 11, and 12 April, 2014	Kafr Zita	Syrian opposition	2/112		Chlorine	[20, 21]
12 and 13 April, 2014	Al-Tamanah	Syrian opposition	0/137			[21, 22]
14 April, 2014	Halfaya		0/4		Chlorine	[20]

Date of Attack	Location	Attack Controlled by	Civilian Victims Fatal/Non-fatal	Soldier Victims Fatal/Non-fatal	CW-agent	Information Source
16 April, 2014	Kafr Zita	Syrian opposition	0/4		Chlorine	[21, 22]
18 April, 2014	Al-Tamanah Kafr Zita	Syrian opposition	4/70 0/100		Chlorine	[21, 22]
21 April, 2014	Talmenes *	Syrian opposition	3/133		Chlorine	[21, 22]
29 April, 2014	Al-Tamanah	Syrian opposition	0/35		Chlorine	[20, 21]
19 May, 2014	Kafr Zita	Syrian opposition	1/130		Chlorine	[23, 24]
21 May, 2014	Kafr Zita	Syrian opposition	0/4		Chlorine	[20]
22 May, 2014	Al-Tamanah	Syrian opposition	4/12		Chlorine	[20]
22 May, 2014	Kafr Zita	Syrian opposition	12/38		Chlorine	[20, 24]
29 May, 2014	Al-Lataminah		0/17		Chlorine	[20]
12 July, 2014	Avdiko	Kurdish forces	0/3		Mustard gas	[25, 26]
27 July, 2014	Kafr Zita	Syrian opposition			Chlorine	[20]
28 and 30 August, 2014	Kafr Zita	Syrian opposition			Chlorine	[20]
16 March, 2015	Qmenas Sarmin	AaS and JaA **	0/70 6/30		Chlorine Chlorine	[27]
23 March, 2015	Binnish	Syrian opposition	30/0		Chlorine	[28]
24 March, 2015	Binnish		0/30		Chlorine	[29, 30]
28 June, 2015	Tell Brak	Kurdish forces		0/12	Mustard gas	[31]
21 August, 2015	Mare	Islamic front	0/30		Mustard gas	[32]

* Two "barrell bombs" struck two houses 100 m from each other, in the neighbourhood around the big mosque

** Ahrar al-Sham and Jund al-Aqsa

*** The U.S. Army and the C.I.A. have both stated that Agent 15 is chemical similar to psychoactive compound BZ (3-quinuclidinyl benzilate)

Places in Syria, where the most serious chemical attacks were executed, are marked on the map in Figure 1 below.

THE SYRIAN CRISIS IS ALSO A CRISIS OF SYRIAN HEALTH

It is difficult to assess what loss of life was caused by chemical attacks and how it influenced the overall result of the conflict. But certainly the attacks contribute to the overall devastation and decline of medical care in the country [33]. The Syrian crisis has created an unprecedented strain on health services and systems due to the protracted nature of the warfare, the targeting of medics and health care infrastructure, the exodus of physicians and nurses, the shortage of medical supplies and medications, and the disruption of medical education and training [34]. The Syrian conflict is one of the largest humanitarian crises of the 21st century [35]. Assistance of foreign missions is useful, but it can't replace failing Syrian Health Service.

CONCLUSIONS

The Syrian conflict is an ongoing internal armed political conflict in Syria. The conflict began on March 15, 2011 by peaceful demonstrations, in the framework of the so called Arab Spring. The conflict developed into a rebellion of a significant portion of the population and in 2012 it escalated into the civil war and a de facto fragmentation of the country into many fractions struggling for a variety of targets within a very confusing conflict.

A part of this conflict is the use of chemical weapons, which is a flagrant violation of the international convention on the prohibition of chemical weapons. It is not entirely clear origin of these banned weapons, nor that drives this prohibition. The situation is very confusing and the parties involved in the conflict are blaming each other. This article attempts to provide a comprehensive picture about individual chemical attacks, a place of conflict, about who led these attacks, which poisonous substances were used and how many victims there were.

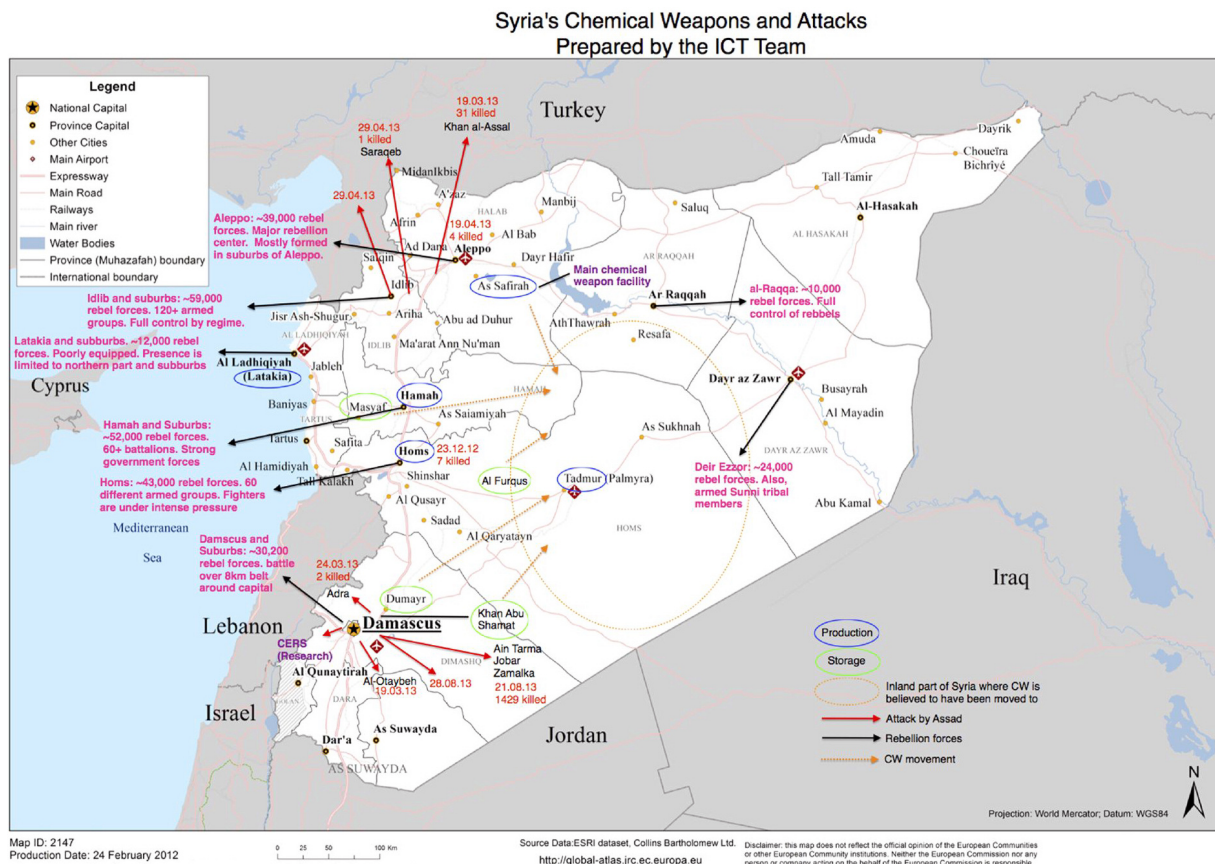


Figure 1. Places in Syria with the most serious chemical attacks (according to

https://www.google.cz/search?q=SYRIA%27S+CHEMICAL+WEAPONS+AND&biw=1468&bih=763&source=lnms&tbn=isch&sa=X&ved=0ahUKEwjh_dbUttvKAhWHqQ4KHZOFcYQ_AUIBigB&dpr=1.2&imgsrc=E1-H7IZPhMRHOM%3A

The results of our survey show that the CW were used by all parties of the conflict, that the attacks caused by chemical warfare agents were carried out in many places in Syria, and that the mostly used substances were sarin, mustard gas and chlorine. The largest number of fatalities was caused by a neuro-paralytic agent sarin.

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